A listener's inferences about why speakers say what they do can influence what the listener remembers. Psychologists studying memory for discourse have neglected to give attention to the source of the information to be remembered. In a study to determine what effects adding information has on remembering initial discourse, subjects listening to taped interviews seemed to alter their memories in accord with what they thought really happened, based on assumptions drawn about the speakers. Additional experiments designed to test this source brought similar results. Listeners in ordinary contexts incorporate what they know about the speaker and what they can infer about that speaker's intentions into the actual facts stored in memory. (ABA)
MEMORY FOR DISCOURSE:

THE EFFECTS OF INFERENCES
ABOUT THE SPEAKER'S INTENTIONS

David H. Dodd
Department of Psychology
University of Utah

Thomas J. Housel
Department of
Human Communication
University of Kentucky

"PERMISSION TO REPRODUCE THIS
MATERIAL HAS BEEN GRANTED BY
David H. Dodd

Thomas J. Housel

TO THE EDUCATIONAL RESOURCES
INFORMATION CENTER (ERIC)."

Paper presented at:
International Communication Association Convention
MEMORY FOR DISCOURSE:
THE EFFECTS OF INFERENCES
ABOUT THE SPEAKER'S INTENTIONS

David H. Dodd and Thomas J. Housel
International Communication Association Convention
May 6, 1979

The study of memory for discourse is one of the most popular topics within psychology today. Research and theories abound, and there are important insights available in the literature. Yet, if there is a major neglect in this research, it is the failure to give any real consideration to the source of the message. This is a matter to which communications experts might be expected to be particularly attuned and knowledgeable, so perhaps this is quite obvious to many of you. It is not so obvious to my colleagues in psychology; perhaps there is some awareness that it exists but there is a preference for the problem of discourse source to go away. The issue will certainly not simplify the problem of theory construction, but neither will it go away. Psychologists have typically given subjects discourse or text from sources not specified, but apparently assumed to be unimpeachable. It is as though the information
provided in such experiments came from heaven, for there is no specifiable source. Yet, in ordinary discourse, there is always a source. In the real world, even experts are not always treated as disinterested sources of information. Certainly, in interpreting and remembering most conversations, we are not prone to treat the information as uncolored by the speaker's perceptions, biases, and inferred purposes in saying whatever is said.

The fact that textual in contrast with ordinary discourse, or conversation materials, are generally used in such research is part of the problem here. As David Olson has recently reminded us, in text the logical or ideational function is somewhat primary, whereas in oral speech, the rhetorical or interpersonal function is more strongly emphasized. It is certainly clear that the source of the information is likely to be linked to the interpersonal. But, really, in either case, the matter of source, including source's intentions, cannot plausibly be ignored as irrelevant to what information is acquired and remembered. Yet source has been widely ignored. In fact, I ignored the problem entirely when I embarked on the first of two lines of research I wish to describe here. So let me begin where I started.

A couple of years ago I was intrigued by a paper by Rand Spiro (1975), who found that elaborate reconstructive inferences
would be remembered by subjects when there was a conflict engendered by information received. Thus, a subject heard about a couple who had a major disagreement, then found out they subsequently got married. Such subjects remembered several weeks later that the couple got counseling or didn't take the disagreement too seriously after all. Even in Spiro's research which is excellent in many ways, the relevant pieces of information still came from the experimenter who is presumably taken by subjects to be a God-like source. I embarked on a comparable study in which I, with the purpose of giving the subjects materials that had more semblance of reality, had the information coming from specified sources. In this study, subjects listened to three recorded tapes, ostensibly from psychological therapy, in which different adolescents described to the therapist an event in which they got into trouble. Embedded in each adolescent's story were some particular facts that we wanted to give a memory test on later. After hearing the tapes, some groups of subjects were given additional information about some of those critical facts. For example, Jim said that he didn't go to school on this particular day, then claims that he hardly ever cuts school. A subject who got additional information about this particular fact was told that school officials reported that Jim cut school often. In experimental conditions, such additional information relevant to those particular facts were given for some of the facts, but not for the others. Across
sub-conditions, the particular facts so added to and those not added to were counter-balanced. In the control condition, no subjects got additional information about any of these facts. The expectation based on the literature was that those conditions in which there was additional information provided would tend to distort their memory for what was heard on the tape in the direction of the new information. This prediction seems to follow directly from Spiro's results, for example. The result should be that the control condition should maintain a relatively veridical memory for these facts and the other conditions should change, with distortions in the direction of the added information. We should note that the measure was taken after a three week delay; subjects came back for a multiple choice examination with questions about what the adolescent had said. We had previously found free recall protocols hopeless to score for our purposes.

For the example above the multiple choice question was: How often did Jim say he cut school besides the day described: Never, hardly ever, sometimes, often. Subjects also gave confidence ratings for their responses, though these results are of no particular interest here.

Unfortunately, exactly the opposite of what we expected happened, that is, the control subjects remembered more in accord with the added information that was received by subjects in the other conditions, information they had not received.
Thus, control subjects heard the adolescent say that he *hardly*
ever cut school, and did not hear the additional information that
other sources said that he *often* cut school, yet they judged that
he said he *often* cut school. Errors of this kind were three
times as likely as errors in the opposite direction, that is,
that he said he *never* cut school. For a moment, that result
seemed a mystery to us. Yet the result is perfectly explainable in
a relatively simple way. Subjects in the control condition seemed
to alter their memories in accord with what they thought really
happened, that is, they figured the adolescent's story to be
distorted to protect the adolescent's integrity and these subjects
made their own corrections toward reality. Thus they did not
accept the information at face value, but changed it to suit
their own inferences about what an adolescent's intentions would
be in telling these stories to a therapist. We subsequently
confirmed that notion by having naive subjects listen to the tape
and fill out the same multiple-choice exam in terms of what the
subject thought had really happened. The same direction of
distortions prevailed, that is, they generally judged based on
the tape only, that Jim had cut school *often*.

What of the other conditions, in which new information
contradicted aspects of the adolescent's story. First of all,
there were changes in memory, but the changes were equally in the
direction of the claims of the subsequent information and in the
opposite direction. For example, where the adolescent claimed he hardly ever cut school and the subsequent information was that he often cut school, the errors were as likely to be never as often. The particular distribution of errors would, of course, be partly a function of the alternatives, but the control subjects were most likely to choose often, and those in the other groups did not. These subjects made somewhat fewer errors overall than the control subjects. What is interesting beyond that is that it did not matter whether that particular fact was one for which there was subsequent information or not. The error rate was the same for either kind of item and there was no tendency for a particular direction of distortion for either. This indicates that subjects in these conditions stored aspects of the adolescent's claims in an abstract or thematic way and probably also represented the counter-claims in a similarly abstract way. Having the additional information actually increased the memorability overall for what had been said by the adolescent. But the abstract or thematic representation is not a content theme at all. Subjects must be remembering something about the general kinds of distortions produced by the adolescents, that is, that the adolescents intended to make themselves look better to the therapist by twisting the truth a little. The theme, then, is interactional, for it is concerned with inferences about a particular speaker's overall
intentions in communicating to a particular listener. Up to the point of receiving the additional information, subjects in all groups had heard the same tapes and thus had the same information, including the same kinds of inferences about intentions. Subjects in the control group used these inferences about intention to make inferences about what really happened and then remembered that as what was said. Subjects in the groups receiving additional information were able to build a counter-theme of information clearly contrasting with what the adolescent had said. Weeks later the integrity of the sources was still protected in memory rather than being merged into one reality, as it was for the control group.

To a cognitive psychologist, this was something new. To some social psychologist friends, it did not seem as remarkable, though it did contradict a previously popular, though widely debated, effect called the sleeper effect, which was essentially that if subjects will listen to a message from an impeachable source, they will subsequently remember the message as true after a time delay, even though they would, if immediately asked, doubt the veracity of that message.

In any case, here I was with an effect that involved the inferred intentions of the speaker on memory for discourse. The results were compelling and the explanation appealed to me. But everywhere I looked in the cognitive literature, the matter
was ignored. At the time, I was reviewing some famous work by
Elizabeth Loftus for a class and decided to embark on a study
deliberately designed to further implicate informational source.
In this work by Loftus, subjects observed a filmed accident and
were subsequently asked questions about what they had seen.
Some of these questions were leading questions, in that they
contain presupposed facts that were, in fact, not true. For
example, they could be asked, "Did you see some children getting
on the school bus?" when there had been no school bus in the film.
Loftus found that subjects were two or three times as likely
to later remember seeing a school bus if they had been asked this
question than under conditions of no question or direct question
(here "Did you see a school bus?"). Loftus and others have
subsequently claimed important legal implications of this
finding, that is, witnesses in legal cases may similarly change
their memories in accord with presuppositions in questions asked
outside or inside the courtroom. I do not deny that this
Loftus effect can happen in legal cases. Nonetheless, I had
a simple thought that suggested to me that this matter was not
so simple. Do questions about what a witness has seen ever
come from heaven in legal cases? Certainly not. Witnesses are
interviewed by the police, who may or may not be neutral.
Mostly they are interviewed by lawyers, who, in the adversary
court system we have, always represent someone or some position.
While some witnesses may not take that into account, I would find it unlikely that the lawyer's purposes in asking questions would be completely ignored by most witnesses. So I designed an experiment to test this source effect. I replicated Loftus's main conditions, but added another in which subjects who received the presuppositional questions were also informed that these questions were posed by a lawyer representing the defendant. What happened is perfectly predictable in terms of knowing about the likely intentions of a lawyer in introducing these presuppositions. The subjects who heard the presuppositions without any indication of source "remembered" more than twice as many of the unseen facts introduced by the presuppositions. Those who heard the presuppositions in questions posed by the lawyer "remembered" slightly more frequently than the control, but the difference was quite minimal and not statistically significant. Their distortions in memory were, however, statistically significantly fewer than those with no source.

In a second, related experiment, we changed the presentation of the presuppositions. In this experiment, the presuppositions were embedded in the text of the account of an eyewitness, either represented as being a neutral bystander or the driver of the car causing the accident. Again, the neutral source generated greater memory for the presupposed, but untrue, facts in comparison to the control condition and the biased source.
Again the biased source resulted in very slightly and insignificantly more of these errors in memory and was significantly less than the neutral source group.

The legal implications of these two experiments are also important, for I think that witnesses are capable of taking into account the intentions of lawyers and others in providing information about the facts of a case, even if that information is subtly interjected as apparent fact. However, I would not mean to convey the impression that lawyers cannot skillfully convince witnesses that their apparent or real intention is to locate the truth and thus transcend a witness’s suspicions. What is clear is that inferences about someone else’s intentions can alter what we remember.

The conclusion to this paper could be stated simply, and I will do that first. Without question, listeners in ordinary contexts incorporate what they know about the speaker and what they can infer about that speaker’s intentions into the actual facts stored in memory. Only in the laboratory where materials can come from an un-named and unimpeachable source can the intentions of the speaker be ignored. Or perhaps only there and in lectures and books, at least to the extent that the material is non-controversial. But where should research of this kind go? For one thing, we need some more developed theory. There are some possible theoretical ideas in social psychology,
particularly in attribution theory, though we cannot develop those notions here. There is also a longstanding literature concerned with the credibility of sources, but we wish to suggest that the matter is broader than that. It is not that a particular source is more or less credible, but that we take into account what that source intends to accomplish by saying something in particular. The adolescent might tell a perfectly veridical tale to a cohort, indeed might even distort the story in the other direction. The question of intentions is fraught with potential conceptual pitfalls, but it must be part of an account of what we remember from discourse. These studies demonstrate that inferences about the speaker's intentions affect memory and the first study seems to show that inference to be thematic as well.

As we suggested at the beginning, communications specialists are particularly attuned to concerns about the effects of source and audience and may contribute to a better understanding of the problems I have discussed. I hope this demonstrates some common interests of our fields and justifies including an outlier psychologist in such a symposium.

(See House and Ackers' paper for references)